

**NEW SOURCE CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT**

**OFFICE OF AIR QUALITY
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES
MANAGEMENT DIVISION**

**Indianapolis Power & Light Company
Thompson Station - 4812 Bridgeport Road
Indianapolis, Indiana 46231**

herein known as the Permittee, is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 097-12818-00377	
Issued by:	Issuance Date:
Daniel B. Dovenbarger Administrator, ERMD	Expiration Date:

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the Environmental Resources Management Division (ERMD). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary source using portable diesel fired generators under a Standard Industrial Classification Code (SIC) of 4911 (establishments engaged in the generation, transmission, and/or distribution of electric energy for sale).

Authorized Individual: William H. Henley
Source Address: Thompson Station - 4812 Bridgeport Road, Indianapolis, IN 46231
Mailing Address: P.O. Box 1595, Indianapolis, Indiana 46206-1595
Phone Number: (317) 261-8764
SIC Code: 4911
County Location: Marion
County Status: Attainment for all criteria pollutants
Source Status: Major Source, Part 70 Permit Program
Minor Source, PSD
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

- (a) Six (6) Cummins diesel fired portable generators identified as Emission Unit ID C1, C2, C3, C4, C5, and C6. Each generator is an internal combustion engine rated at 1250 kilowatts or 1635 brake horsepower with a maximum hourly diesel fuel consumption rate of 74.5 gallons per hour.
- (b) Eighteen (18) Cummins diesel fired portable generators identified as Emission Unit ID C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, and C24. Each generator is an internal combustion engine rated at 1500 kilowatts or 1855 brake horsepower with a maximum hourly diesel fuel consumption rate of 84.5 gallons per hour.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).
- (c) Pursuant to 40 CFR 72.7, it is an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3) and must apply for New Unit Exemption Status no later than December 31 of the first year of operation.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled "First Time Operating Permit", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 First Time Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ) and ERMD.
 - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to ERMD.
 - (2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the ERMD prior to beginning operation of the facilities.
- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the ERMD, the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to

326 IAC 2-7-19 (Fees).

- (e) Pursuant to 326 IAC 2-7-4(a)(1)(A)(ii) and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit within twelve (12) months of the date on which the source first meets an applicability criterion of 326 IAC 2-7-2.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit NO_x is limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAQ prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, and ERMD upon request and shall be subject to review and approval by IDEM, OAQ, and ERMD. IDEM, OAQ, and ERMD may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resource Management Division
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Source Modification [326 IAC 2-7-10.5]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-10.5 whenever the Permittee seeks to construct new emissions units, modify existing emissions units, or otherwise modify the source.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resource Management Division
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.

C.5 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, ERMD, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch and ERMD, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, and ERMD shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.7 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM and ERMD, the fact that continuance of this permit is not consistent with purposes of this article.

C.8 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity) monitor in a six (6) hour period.

C.9 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.10 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resource Management Division
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ and ERMD within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, and ERMD, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

- (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ and ERMD upon request and shall be subject to review and approval by IDEM, OAQ, and ERMD. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the

Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 Annual Emission Statement [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

- (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015
- and
- Environmental Resource Management Division
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and ERMD on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.17 Monitoring Data Availability [326 IAC 2-6.1-5] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM and ERMD may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.18 Emergency Reduction Plans [326 IAC 1-5-2]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resource Management Division
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

within ninety (90) calendar days from the date on which this source commences operation.
- (c) If the ERP is disapproved by IDEM, OAQ and ERMD, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAQ, and ERMD shall supply such a plan.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (g) Upon direct notification by IDEM, OAQ, and ERMD, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

C.19 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, and ERMD representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or ERMD makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or ERMD within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;

- (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.20 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-5] [IC 13-14-1-13]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resource Management Division
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if

received by IDEM, OAQ, and ERMD on or before the date it is due.

- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) A malfunction as described in 326 IAC 1-6-2; or
 - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
 - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.21 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

and

Environmental Resource Management Division
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and ERMD on or before the date it is due.

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

- (a) Six (6) Cummins diesel fired portable generators identified as Emission Unit ID C1, C2, C3, C4, C5, and C6. Each generator is an internal combustion engine rated at 1250 kilowatts or 1635 brake horsepower with a maximum hourly diesel fuel consumption rate of 74.5 gallons per hour.
- (b) Eighteen (18) Cummins diesel fired portable generators identified as Emission Unit ID C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, and C24. Each generator is an internal combustion engine rated at 1500 kilowatts or 1855 brake horsepower with a maximum hourly diesel fuel consumption rate of 84.5 gallons per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) Emission Unit ID C1 through C24 shall be limited to a combined total of 879,000 gallons of diesel fuel per rolling twelve (12) consecutive month period.
- (b) Emission Unit ID C1 through C24 each shall be limited to 42.17 pounds NO_x per hour.

Limiting combined total maximum diesel fuel consumption to 879,000 gallons per rolling twelve (12) consecutive month period and NO_x emissions to 42.17 pounds per hour for each Emission Unit is equivalent to 249.0 tons of NO_x emissions per rolling twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

By limiting combined total maximum diesel fuel consumption to 879,000 gallons per rolling twelve (12) consecutive month period, PM, PM-10, and VOC emissions are less than 10.0 tons per rolling twelve (12) consecutive month period. By limiting combined total maximum diesel fuel consumption to 879,000 gallons per rolling twelve (12) consecutive month period, SO₂ emissions from each Emission Unit ID C1 through C25 are less than 25.0 tons per rolling twelve (12) consecutive month period. Therefore, 326 IAC 6 (Particulate Rules), 326 IAC 7 (Sulfur Dioxide Rules) and 326 IAC 8 (Volatile Organic Compound Rules) do not apply.

D.1.2 NAAQS Demonstration [40 CFR 50][326 IAC 1-3]

Pursuant to 40 CFR Part 50 (National Primary and Secondary Ambient Air Quality Standards) and 326 IAC 1-3 (Ambient Air Quality Standards), Emission Unit ID C1 through C24 each shall not be operated more than a cumulative total of 16.0 hours per calendar day such that attainment of all National Ambient Air Quality Standards (NAAQS) will be demonstrated.

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit ID C1 through C24.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM and/or ERMD may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or ERMD, compliance with the NO_x limit specified in Condition D.1.1(b) shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.5 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records of combined total diesel fuel consumption for Emission Unit ID C1 through C24. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the diesel fuel usage limits and/or the Nox emission limit established in Condition D.1.1.
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records of Emission Unit ID C1 through C24 operating hours. Records maintained shall be taken daily and shall be complete and sufficient to establish compliance with the maximum daily operating schedule established in Condition D.1.2.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.6 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.12 and D.1.5 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

**Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section
and
City of Indianapolis
Environmental Resources Management Division**

Quarterly Report

Company Name: Indianapolis Power & Light Company - Thompson Station
Location: 4812 Bridgeport Road, Indianapolis, Indiana 46231
Permit No.: MSOP 097-12818-00377
Source: Emission Unit ID's C1 through C24
Pollutant: NOx
Limit: Combined total diesel fuel consumption of 879,000 gallons per rolling twelve (12) consecutive month period

Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Indiana Department of Environmental Management Office of Air Quality Compliance Data Section and City of Indianapolis Environmental Resources Management Division Monthly Report

Company Name: Indianapolis Power & Light Company - Thompson Station
 Location: 4812 Bridgeport Road, Indianapolis, Indiana 46231
 Permit No.: MSOP 097-12818-00377
 Source: Emission Unit ID's C1 through C12
 Pollutant: NAAQS Demonstration
 Limit: Each engine, C1 through C12, limited to 16.0 or less operating hours per day

Month: _____ Year: _____

Day	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	Day	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
1													17												
2													18												
3													19												
4													20												
5													21												
6													22												
7													23												
8													24												
9													25												
10													26												
11													27												
12													28												
13													29												
14													30												
15													31												
16																									

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

**Indiana Department of Environmental Management Office of Air Quality Compliance Data
Section and
City of Indianapolis Environmental Resources Management Division
Monthly Report**

Company Name: Indianapolis Power & Light Company - Thompson Station
Location: 4812 Bridgeport Road, Indianapolis, Indiana 46231
Permit No.: MSOP 097-12818-00377
Source: Emission Unit ID's C13 through C24
Pollutant: NAAQS Demonstration
Limit: Each engine, C13 through C24, limited to 16.0 or less operating hours per day

Month: _____ Year: _____

Day	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	Day	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24
1													17												
2													18												
3													19												
4													20												
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8													24												
9													25												
10													26												
11													27												
12													28												
13													29												
14													30												
15													31												
16																									

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR Quality
COMPLIANCE DATA SECTION
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
AIR QUALITY MANAGEMENT SECTION
DATA COMPLIANCE**

**MINOR SOURCE OPERATING PERMIT
QUARTERLY COMPLIANCE MONITORING REPORT**

Source Name: **Indianapolis Power & Light Company**
Source Address: **Thompson Station - 4812 Bridgeport Road, Indianapolis, IN**
Mailing Address: **P.O. Box 1595, Indianapolis, Indiana 46206-1595**
MSOP No.: **097-12818-00377**

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (e.g. Permit Condition D.1.3)	Number of Deviations	Date of each Deviation

Form Completed By: _____
Title/Position: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR Quality
COMPLIANCE DATA SECTION
and
CITY OF INDIANAPOLIS
ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Indianapolis Power & Light Company - Thompson Station
Address:	4812 Bridgeport Road, Indianapolis, IN 46231
City:	Indianapolis
Phone #:	(317) 261-8764
MSOP #:	097-12818-00377

I hereby certify that the Indianapolis Power & Light Company - Thompson Station is
☒ still in operation.
☐ no longer in operation.

I hereby certify that the Indianapolis Power & Light Company - Thompson Station is
☒ in compliance with the requirements of MSOP **097-12818-00377**.
☐ not in compliance with the requirements of MSOP **097-12818-00377**.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR Quality
FAX NUMBER: 317 233-5967
and
CITY OF INDIANAPOLIS
ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
Fax: 317-327-2274

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ? _____, 25 TONS/YEAR SULFUR DIOXIDE ? _____, 25 TONS/YEAR NITROGEN OXIDES ? _____, 25 TONS/YEAR VOC ? _____, 25 TONS/YEAR HYDROGEN SULFIDE ? _____, 25 TONS/YEAR TOTAL REDUCED SULFUR ? _____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ? _____, 25 TONS/YEAR FLUORIDES ? _____, 100 TONS/YEAR CARBON MONOXIDE ? _____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ? _____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ? _____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ? _____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ? _____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____

LOCATION: (CITY AND COUNTY) _____

PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____

INSP: _____

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND

REASON: _____

DATE/TIME MALFUNCTION STARTED: _____ / _____ / 20 _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE _____ / _____ / 20 _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO₂, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____ (SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

**Please note - This form should only be used to report malfunctions
applicable to Rule 326 IAC 1-6 and to qualify for
the exemption under 326 IAC 1-6-4.**

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Mail to: Air Quality Management Section
Environmental Resources Management Division
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097

Indianapolis Power & Light Thompson Station
4812 Bridgeport Road
Indianapolis, Indiana 46218

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that, Indianapolis Power & Light has constructed the following: Installation of diesel fired generators in conformity with the requirements and intent of the construction permit application received by the Environmental Resources Management Division and as permitted pursuant to **New Source Construction Permit and Minor Source Operation Permit No. -097-12818-00377, Plant ID No. 097-00377** issued on _____
5. Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 20 _____.

My Commission expires: _____

Signature

Name (typed or printed)

Attachment A

The following state rule have been adopted by reference by the Indianapolis Air Pollutant Control Board and are enforceable by Indianapolis Environmental Resources Management Division (ERMD) using local enforcement procedures.

- (1) 326 IAC 1-1-1 through 1-1-3 and 1-1-5;
- (2) 326 IAC 1-2-1 through 1-2-91 (In addition, the IAPCB has adopted several local definitions);
- (3) 326 IAC 1-3-1 through 1-3-4;
- (4) 326 IAC 1-4-1 (The IAPCB added to the adoption by reference a citation to 61 FR 58482 (November 15, 1996));
- (5) 326 IAC 1-5-1 through 1-5-5;
- (6) 326 IAC 1-6-1 through 1-6-6;
- (7) 326 IAC 1-7-1 through 1-7-5;
- (8) 326 IAC 2-3-1 through 2-3-5;
- (9) 326 IAC 2-4-1 through 2-4-6;
- (10) 326 IAC 2-6-1 through 2-6-4;
- (11) 326 IAC 2-7-1 through 2-7-18, 2-7-20 through 2-7-25;
- (12) 326 IAC 2-8-1 through 2-8-15, 2-8-17 through 2-8-10;
- (13) 326 IAC 2-9-1 through 2-9-14;
- (14) 326 IAC 2-10-1 through 2-10-5 (The IAPCB adoption adds the language "state or local" immediately after the word "federal" in 326 IAC 2-10-1);
- (15) 326 IAC 2-11-1, 2-11-3 and 2-11-4 (The IAPCB adoption adds the language "federal, state or local" immediately after the word "by" in 326 IAC 2-11-1);
- (16) 326 IAC 3-1.1-1 through 3-1.1-5;
- (17) 326 IAC 3-2.1-1 through 3-2.1-5;
- (18) 326 IAC 3-3-1 through 3-3-5;
- (19) 326 IAC 4-2-1 through 4-2-2;
- (20) 326 IAC 5-1-1 (a), (b) and c) (5), 5-1-2 (1), (2)(A), (2)c) (4), 5-1-3 through 5-1-5, 5-1-7;
- (21) 326 IAC 7-1.1-1 and 7-1.1-2;
- (22) 326 IAC 7-2-1;
- (23) 326 IAC 7-3-1 and 7-3-2;
- (24) 326 IAC 7-4-2(28) through (31) (Instead of adopting by reference 7-4-2(1) through (27), the IAPCB regulation substitutes the same requirements listed in a format in which the companies are alphabetized and emission points known to no longer exist have been deleted);
- (25) 326 IAC 8-1-0.5 except (b), 8-1-1 through 8-1-2, 8-1-3 except c), (g) and (i), 8-1-5 through 8-1-12;
- (26) 326 IAC 8-2-1 through 8-2-12 (The IAPCB adoption by reference of 8-2- 5 adds additional language specific to Zimmer Paper Products, Incorporated as subpart c);
- (27) 326 IAC 8-3-1 through 8-3-7;
- (28) 326 IAC 8-4-1 through 8-4-5, 8-4-6 (a)(6), (a)(8) and (a)(14) and 8-4-6(b)(1), (b)(3) and 8-4-6c) (In place of 8-4-6(b)(2), which was not adopted, the IAPCB adopted language requiring a pressure relief valve set to release at no less than four and eight-tenths (4.8) Kilo Pascals (seven-tenths (0.7) pounds per square inch)), 8-4-7 except (e), 8-4-8 and 8-4-9;
- (29) 326 IAC 8-5-1 through 8-5-4, 8-5-5 except (a)(3) and (d)(3);
- (30) 326 IAC 8-6-1 and 8-6-2;
- (31) 326 IAC 9-1-1 and 9-1-2;
- (32) 326 IAC 11-1-1 through 11-1-2;
- (33) 326 IAC 11-2-1 through 11-2-3;
- (34) 326 IAC 11-3-1 through 11-3-6;
- (35) 326 IAC 14-1-1 through 14-1-4;

Attachment A continued

- (36) 326 IAC 14-2-1 except 40 CFR 61.145;
- (37) 326 IAC 14-3-1;
- (38) 326 IAC 14-4-1;
- (39) 326 IAC 14-5-1;
- (40) 326 IAC 14-6-1;
- (41) 326 IAC 14-7-1;
- (42) 326 IAC 14-8-1 through 14-8-5;
- (43) 326 IAC 15-1-1, 15-1-2(a)(1), (a)(2) and (a)(8), 15-1-3 and 15-1-4;
- (44) 326 IAC 20-1-1 through 20-1-4 (In 20-1-3(b)(2) the adoption states that "permitting authority" means the commissioner of IDEM or the administrator of ERMD, whichever is applicable);
- (45) 326 IAC 20-2-1;
- (46) 326 IAC 20-3-1;
- (47) 326 IAC 20-4-1;
- (48) 326 IAC 20-5-1;
- (49) 326 IAC 20-6-1;
- (50) 326 IAC 20-7-1;
- (51) 326 IAC 20-8-1;
- (52) 326 IAC 20-9-1;
- (53) 326 IAC 20-14-1;
- (54) 326 IAC 20-15-1;
- (55) 326 IAC 20-16-1;
- (56) 326 IAC 20-17-1;
- (57) 326 IAC 20-18-1;
- (58) 326 IAC 20-19-1;
- (59) 326 IAC 20-20-1;
- (60) 326 IAC 20-21-1;
- (61) 326 IAC 21-1-1 (The adoption states that "or the administrator of ERMD" is added in (b));
- (62) 326 IAC 22-1-1 (The adoption states that "or the administrator of ERMD" is added in (b)).

**Indiana Department of Environmental Management
Office of Air Quality
and
Indianapolis Environmental Resources Management Division**

**Addendum to the Technical Support Document for
New Source Construction Permit and Minor Source Operating Permit**

Source Name: Indianapolis Power & Light Company
Source Location: Thompson Station - 4812 Bridgeport Road, Indianapolis, IN
County: Marion
SIC Code: 4911
Operation Permit No.: 097-12818-00377
Permit Reviewer: Jeremy Boyer

On December 28, 2000, the Office of Air Quality (OAQ) and the City of Indianapolis Environmental Resources Management Division (ERMD) had a notice published in the Indianapolis Star Newspaper in Indianapolis, Indiana, stating that Indianapolis Power & Light Company (IPL) had applied for a New Source Construction Permit and Minor Source Operating Permit to operate portable diesel fired internal combustion engine generators at the Thompson Station - 4812 Bridgeport Road, Indianapolis, Indiana. The notice also stated that OAQ and ERMD proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On January 10, 2001 IPL submitted the air quality modeling study entitled "Evaluation of Ambient Impacts from Diesel Engine Generators; Brookwood and Thompson Substations Indianapolis, Indiana." On January 26, 2001, IPL submitted two (2) written pages of comments on the proposed public notice version permit. On February 1, 2001 ERMD and IPL met to discuss the implications of the air quality modeling study as it relates to the Thompson Station. In response to the outcome of the February 1, 2001 meeting, IPL submitted the air quality modeling study entitled "Addendum to: Evaluation of Ambient Impacts from Diesel Engine Generators; Indianapolis Indiana on February 20, 2001. The summary of the comments is as follows (additions appear in bold, deletions in strikeout):

Comment: IDEM, OAQ

During the thirty (30) day public notice period, the Indiana Department of Environmental Management, Office of Air Management (OAM) changed its name to the Indiana Department of Environmental Management, Office of Air Quality (OAQ). All references to the Office of Air Management throughout the permit have been changed to the Office of Air Quality. Also, all references to OAM have been changed to OAQ. These changes were made to the model permit creating the latest version dated 01/05/01. These changes shall be made to all drafted and proposed versions of all permits not yet issued. Since these changes do not constitute a significant change, re-public notice will not be necessary.

Response to Comment:

All references to the Office of Air Management have been changed to the Office of Air Quality. Also, all references to OAM have been changed to OAQ. These changes were made throughout the proposed permit and reporting forms. Since these changes do not constitute a significant change, re-public notice will not be necessary.

In addition, a new ERMD Administrator has been appointed since the draft permit was public noticed. As a result, the signature box on page 1 of the permit now states:

Operation Permit No.: MSOP 097-12818-00377	
Issued by: Daniel B. Dovenbarger Administrator, ERMD Mona A. Salem, Chief Operating Officer Department of Public Works City of Indianapolis	Issuance Date: Expiration Date:

Each of the following comments and resulting responses are from the January 26, 2001 IPL written response.

Comment 1: IPL

Please be aware that the new authorized individual will be William H. Henley (261-8764), Supply Business Unit Leader and the new contact name is Mark Siner (261-8971) each can be reached at the mail address of P.O. Box 1595, Indianapolis, IN 46206-1595.

Response to Comment 1:

In response to these updates, the following changes are made to Condition A.1 of the proposed permit:

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary source using portable diesel fired generators under a Standard Industrial Classification Code (SIC) of 4911 (establishments engaged in the generation, transmission, and/or distribution of electric energy for sale).

Authorized Individual:	William H. Henley Stephen M. Powell
Source Address:	Thompson Station - 4812 Bridgeport Road, Indianapolis, IN
Mailing Address:	P.O. Box 1595, Indianapolis, Indiana 46206-1595 1230 W. Morris St., Indianapolis, Indiana 46221
Phone Number:	(317) 261-8764 (317)-261-5075
SIC Code:	4911
County Location:	Marion
County Status:	Attainment for all criteria pollutants
Source Status:	Major Source, Part 70 Permit Program Minor Source, PSD Minor Source, Section 112 of the Clean Air Act

Comment 2: IPL

In regards to Condition C.2 Preventive Maintenance Plan, historical interpretation, and IPL's, of the preventive maintenance plan rule language is that it applies only to units with emission control devices. IPL requests this condition be deleted.

Response to Comment 2:

Pursuant to 326 IAC 2-5.1-4 (Construction of New Sources: Transition Provisions), the Administrator shall include an approval to operate and operating conditions in an initial construction permit. A source may request approval to operate under a state operating permit under 326 IAC 2-6.1 if the source is subject to the Part 70 requirements of 326 IAC 2-7 (Part 70 Permit Program) and will submit a Part 70 permit application within twelve (12) months of the date the source is approved to operate. The source has potential to emit above major source thresholds, pursuant to 326 IAC 2-7, and is seeking initial approval to

construct and operate under 326 IAC 2-6.1 (Minor Source Operating Permit Program).

Pursuant to 326 IAC 2-7-5(13), a Preventive Maintenance Plan is required as part of the permit content. This rule refers back to the Preventive Maintenance Plan requirement as described in 326 IAC 1-6-3. The applicability of a Preventive Maintenance Plan reverts to the applicability criteria of 326 IAC 1-6-1 and not specifically what emission units have control devices and which ones do not. The rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1. 326 IAC 1-6-3 identifies what a preventive maintenance plan should include but is not limited to:

- (1) Identification of the individuals responsible for inspecting, maintaining and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),
- (2) The description of the items or conditions in the facility that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and
- (3) The identification and quantification of the replacement parts for the facility which the permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(2)).

The emission unit equipment and/or the emission control equipment may be covered by a written recommendation from the manufacturer and set out schedules for the regular inspection and maintenance of the equipment. The permittee will usually have adopted an inspection and maintenance schedule that works for its particular equipment and process in order to keep equipment downtime to a minimum and achieve environmental compliance. The manufacturer may also have indicated, or the permittee may know from experience, what replacement parts should be kept on hand. The permittee may already keep sufficient spare parts on hand so that if a replacement is needed, it can be quickly installed, without a delay in the permittee's business activities and without an environmental violation. For the most part, the PMP can be created by combining present business practices and equipment manufacturer guidance into one document, the Preventive Maintenance Plan (PMP).

As a result there is no change to Condition C.2 Preventive Maintenance Plan.

Comment 3: IPL

In regards to Condition C.13 Compliance Monitoring Plan - Failure to Take Response Steps, there is no regulatory requirement to include a Compliance Monitoring Plan and this condition must be deleted. 326 IAC 1-6 does not include this language. It addresses malfunction reporting and preventive maintenance plans. The citation referenced is being used out of context and is not applicable.

Response to Comment 3:

IDEM has worked with members of the Clean Air Act Advisory Council's Permit Committee, Indiana Manufacturing Association, Indiana Chamber of Commerce and individual applicants regarding the Preventive Maintenance Plan, the Compliance Monitoring Plan and the Compliance Response Plan. IDEM has clarified the preventive maintenance requirements by working with sources on draft language over the past several years. The plans are fully supported by rules promulgated by the Air Pollution Control Board. The plans are the mechanism each permittee will use to verify continuous compliance with its permit and the applicable rules and will form the basis for each permittee's Annual Compliance Certification.

IPL is seeking to construct a major source under 326 IAC 2-7. 326 IAC 2-5.1-4 allows a new major source under 326 IAC 2-7 to construct within a much shorter time frame than if the source were to seek its initial construction and operating permit under 326 IAC 2-7. Each permittee's ability to verify continuous compliance with its air pollution control requirements is a central goal of the Title V permit program.

The regulatory authority for and the essential elements of a compliance monitoring plan were clarified in IDEM's Compliance Monitoring Guidance, in May 1996. IDEM originally placed all the preventive maintenance requirements in the permit section titled "Preventive Maintenance Plan." Under that section

the permittee's Preventive Maintenance Plan(PMP) had to set out requirements for the inspection and maintenance of equipment both on a routine basis and in response to monitoring. Routine maintenance was a set schedule of inspections and maintenance of the equipment. The second was inspection and maintenance in response to monitoring that showed that the equipment was not operating in its normal range. This monitoring would indicate that maintenance was required to prevent the exceedance of an emission limit or other permit requirement. The maintenance plan was to set out the "corrective actions" that the permittee would take in the event an inspection indicated an "out of specification situation", and also set out the time frame for taking the corrective action. In addition, the PMP had to include a schedule for devising additional corrective actions for out of compliance situations that the source had not predicted in the PMP. All these plans, actions and schedules were part of the Preventive Maintenance Plan, with the purpose of maintaining the permittee's equipment so that an exceedance of an emission limit or violation of other permit requirements could be prevented.

After issuing the first draft Title V permits on public notice in July of 1997, IDEM received comments from members of the regulated community regarding many of the draft permit terms, including the PMP requirements. One suggestion was that the corrective action and related schedule requirements be removed from the PMP requirement and placed into some other requirement in the permit. This suggestion was based, in some part, on the desire that a permittee's maintenance staff handle the routine maintenance of the equipment, and a permittee's environmental compliance and engineering staff handle the compliance monitoring and steps taken in reaction to an indication that the facility required maintenance to prevent an environmental problem.

IDEM carefully considered this suggestion and agreed to separate the "corrective actions" and related schedule requirements from the PMP. These requirements were placed into a separate requirement, which IDEM named the Compliance Response Plan (CRP). In response to another comment, IDEM changed the name of the "corrective actions" to "response steps." That is how the present CRP requirements became separated from the PMP requirement, and acquired their distinctive nomenclature.

Other comments sought clarification on whether the failure to follow the PMP was violation of the permit. The concern was that a permittee's PMP might call for the permittee to have, for example, three "widget" replacement parts in inventory. If one widgets was taken from inventory for use in maintenance, then the permittee might be in violation of the PMP, since there were no longer three widgets in inventory, as required by the PMP. Comments also expressed a view that if a maintenance employee was unexpectedly delayed in making the inspection under the PMP's schedule, for example by the employee's sudden illness, another permit violation could occur, even though the equipment was still functioning properly.

IDEM considered the comments and revised the PMP requirement so that if the permittee fails to follow its PMP, a permit violation will occur only if the lack of proper maintenance causes or contributes to a violation of any limitation on emissions or potential to emit. This was also the second basis for separating the compliance maintenance response steps from the PMP and placing them in the Compliance Response Plan (CRP). Unlike the PMP, the permittee must conduct the required monitoring and take any response steps as set out in the CRP (unless otherwise excused) or a permit violation will occur.

The Compliance Monitoring Plan is made up of the PMP, the CRP, the compliance monitoring and compliance determination requirements in section D of the permit, and the record keeping and reporting requirements in sections C and D. IDEM decided to list all these requirements under this new name, the Compliance Monitoring Plan (CMP), to distinguish them from the PMP requirements. The section D provisions set out which facilities must comply with the CMP requirement. The authority for the CMP provisions is found at 326 IAC 2-7-5(1), 2-7-5(3), 2-7-5(13), 2-7-6(1), 1-6-3 and 1-6-5.

As a result, there is no change to Condition C.13 Compliance Monitoring Plan - Failure to Take Response Steps

Comment 4: IPL

In regards to Condition C.14 Actions Related to Noncompliance Demonstrated by a Stack Test, there is no regulatory basis for this condition and it must be deleted.

Response to Comment 4:

IPL is seeking to construct a major source pursuant to 326 IAC 2-7. 326 IAC 2-5.1-4 allows a new major source under 326 IAC 2-7 to construct within a much shorter time frame than if the source were to seek its initial construction and operating permit under 326 IAC 2-7. The specific regulatory requirement for Actions Relating to Noncompliance Demonstrated by a Stack Test is the citation used for the entire Corrective Actions and Response Steps section. The rules cited are 326 IAC 2-7-5 and 326 IAC 2-7-6. The provision is also consistent with the Compliance Monitoring Plan provisions and the reporting of deviations.

As a result, there is no change to Condition C.14 Actions Related to Noncompliance Demonstrated by a Stack Test.

Comment 5: IPL

In regards to Condition C.16 Annual Emission Statement, the regulation does not require that HAPs emissions be reported. There is no regulatory basis for this condition and it must be deleted.

Response to Comment 5:

Condition C.16(a) (2) requires the source to "Indicate actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1) from the source, for purposes of Part 70 fee assessment. HAPs are "regulated pollutants" under 326 IAC 2-7-1.

As a result, there is no change to Condition C.16 Annual Emission Statement.

Comment 6: IPL

In regards to Condition C.17 Monitoring Data Availability, the citation 326 IAC 2-6.1-2 is not applicable to establish record keeping requirements. This regulation references the need to apply for an operating permit.

Response to Comment 6:

IDEM, OAQ and ERMD agree that 326 IAC 2-6.1-2 is the incorrect rule cite for this condition. The correct rule cite is 326 IAC 2-6.1-5(a)(2) and is being inserted in the Table of Contents for Condition C.17 Monitoring Data Availability and in Condition C.17 on page 13 of 28 as follows:

C.17 Monitoring Data Availability **[326 IAC 2-6.1-5]** ~~[326 IAC 2-6.1-2]~~ [IC 13-14-1-13]

Comment 7: IPL

In regards to Condition C.19 General Record Keeping Requirements, based on the fact that these units are leased portable units and may be removed each year, IPL is requesting that all data be kept under the authority of Bill Henley, the authorized individual. He is currently located at the IPL Corporate Center. He or Mark Siner will have to be contacted in advance of any inspections to provide personnel at the site to unlock the trailers. At that time, any pertinent data will be made available.

Section (c)(4) starting with the language "Records of response steps taken" must be deleted as there is no regulatory authority requiring this task. The correct citation for 5 year general record keeping requirement would include the citation 326 IAC 3-5-6(a).

Response to Comment 7:

For the purposes of this review and determination, IPL has agreed to monitor daily hours of operation and fuel consumption to demonstrate compliance with the NAAQs and 326 IAC 2-2. ERMD estimates that there will be some level of on site measurement of hours of operation or fuel consumption at this location to generate such records. IPL is seeking to construct a major source under 326 IAC 2-7. 326 IAC 2-5.1-4 allows a new major source under 326 IAC 2-7 to construct within a much shorter time frame than if the source were to seek its initial construction and operating permit under 326 IAC 2-7. Therefore, 326 IAC 2-7-5 does apply to this source. Under 326 IAC 2-7-5(3)(B)(ii)(DD) requires a source to retain records on site for up to three (3) years. This is an expressly stated regulatory requirement. If IPL wishes to retain a historical record of all operating year records at the corporate center location as well to aid in future records inspection, the Condition does not require amendment.

IDEM, OAQ and ERMD agree that 326 IAC 2-6.1-2 is an incorrect rule cite for this condition. The correct rule cite is 326 IAC 2-6.1-5(a)(2) and is being inserted in the Table of Contents for Condition C.19 General Record Keeping Requirements and in Condition C.19 on page 14 of 27 as follows:

C.19 General Record Keeping Requirements **[326 IAC 2-6.1-5]** ~~[326 IAC 2-6.1-2]~~

In regards to Condition C.19(c)(4), see TSD Addendum Comment 4 and Response to Comment 4. As a result, there is no additional change to Condition C.19 General Record Keeping Requirements.

Comment 8: IPL

In regards to Condition C.20 General Reporting Requirements, there is no requirement to report “deviations” until a source has a Title V permit. This condition should be deleted along with the form entitled “Quarterly Compliance Monitoring Report.” The regulations cited do not support the need for this condition and reporting requirement.

Response to Comment 8:

IPL is seeking to construct a major source under 326 IAC 2-7. 326 IAC 2-5.1-4 allows a new major source under 326 IAC 2-7 to construct within a much shorter time frame than if the source were to seek its initial construction and operating permit under 326 IAC 2-7. Therefore, 326 IAC 2-7 does apply to this source. However, IDEM, OAQ and ERMD agree that 326 IAC 2-6.1-2 is an incorrect rule cite for this condition. The correct rule cite is 326 IAC 2-6.1-5 and is being inserted in the Table of Contents for Condition C.20 General Reporting Requirements and in Condition C.20 on page 15 of 27 as follows:

C.20 General Reporting Requirements [326 IAC 2-1.1-11] **[326 IAC 2-6.1-5]** ~~[326 IAC 2-6.1-2]~~ [IC 13-14-1-13]

Comment 9: IPL

In regards to Condition D.1.2, a Preventive Maintenance Plan is not required for these units. Please delete the language from the permit. See comments on Condition C.2.

Response to Comment 9:

See TSD Addendum Comment 2 and Response to Comment 2 for discussion. No change is being made to Condition D.1.2 Preventive Maintenance Plan.

Comment 10: IPL

In regards to the Quarterly Compliance Monitoring Report Form, please delete this form as this is not a Title V permit and there is no regulatory requirement to submit this report. The included reference does not support a need for this form.

Response to Comment 10:

See TSD Addendum Comment 8 and Response to Comment 8 for a discussion on the intended use of this form. The reference to D.1.3 in the actual report form is intended to be an example of what to display in the column and not a direct reference to Condition D.1.3 of this permit. As a result, there is no change to the Quarterly Report Form.

Comment 11: IPL

In regards to the Annual Notification Form, please change the phone number associated with this form to William Henley's telephone number, 261-8764.

Response to Comment 11:

The Annual Notification Form on page 22 of 27 has been changed to:

Company Name:	Indianapolis Power & Light Company - Thompson Station
Address:	Thompson Station - 4812 Bridgeport Road, Indianapolis, IN
City:	Indianapolis
Phone #:	(317) 261-8764 (317) 261-5075
MSOP #:	097-12817-00378

Comment 12: IPL

In regards to the Malfunction Report, delete the first box on the form with all the extraneous information requested. This data is not required to report a malfunction and complicates the completion of this notification. Most operators who would be completing this form for submittal will not be experienced in the permitting aspect of the operation and not have this information readily available.

Response to Comment 12:

All sources seeking to construct a major source under 326 IAC 2-7 pursuant to the provisions of 326 IAC 2-5.1-4 have this standardized form included as part of their permit. It is important to know why a source is reporting a particular problem under the malfunction rule and the first box does contain information regarding the duration of the malfunction and compliance with regulations or permit conditions. As a result, there is no change to the Malfunction Report on page 23 of 27.

Comment 13: IPL

In the TSD under the section Existing Approvals, IPL requests that the language in the last statement be changed to say that the leased units have been disconnected at the site rather than removed.

Response to Comment 13:

The original public notice version of the Technical Support Document is not changed based upon public notice comments. All updates to the document are done through this TSD Addendum. In addition, ERMD compliance inspection verified on or after September 29, 2000 that the unit(s) had been disconnected from supplying power to the grid but remain on the site. The new language under existing approvals is amended to now state:

Existing Approvals

There are no approvals issued to this source during this review. This source was previously issued a Registration (R097-12024-00377) on May 12, 2000 which expired on September 30, 2000. There was an expiration date placed in the Registration because the emission units installed at the time of issuance were leased units with the leasing expiring at that the end of summer 2000. As a result, this issuance will be considered as the first approval for this source as the leased units have been **disconnected from supplying power to the grid.** ~~removed from the premises and the R097-12024-00377 expired September 30, 2000.~~

Comment 14: IPL

In the TSD under **Stack Summary** on page 2 of 8, the stack summary should indicate an effective diameter of 14.14 inches. The calculation should be based on two 10" stacks. This updated information was provided in the revised Form F's submitted for each site.

Response to Comment 14:

IDEM, OAQ and ERMD received Form F's pertaining to stack data via e-mail on December 13, 2000. The new **Stack Summary** Table reflects the effective diameter reported and is amended as follows:

Stack Summary

Stack ID	Operation	Height (feet)	Diameter* (Inches)	Flow Rate (cfm)	Temperature (°F)
C1	Generator	13.5	14.14 26.2	8845	985
C2	Generator	13.5	14.14 26.2	8845	985
C3	Generator	13.5	14.14 26.2	8845	985
C4	Generator	13.5	14.14 26.2	8845	985
C5	Generator	13.5	14.14 26.2	8845	985
C6	Generator	13.5	14.14 26.2	8845	985
C7	Generator	13.5	14.14 26.2	9600	880
C8	Generator	13.5	14.14 26.2	9600	880
C9	Generator	13.5	14.14 26.2	9600	880
C10	Generator	13.5	14.14 26.2	9600	880
C11	Generator	13.5	14.14 26.2	9600	880
C12	Generator	13.5	14.14 26.2	9600	880
C13	Generator	13.5	14.14 26.2	9600	880
C14	Generator	13.5	14.14 26.2	9600	880
C15	Generator	13.5	14.14 26.2	9600	880
C16	Generator	13.5	14.14 26.2	9600	880
C17	Generator	13.5	14.14 26.2	9600	880
C18	Generator	13.5	14.14 26.2	9600	880
C19	Generator	13.5	14.14 26.2	9600	880
C20	Generator	13.5	14.14 26.2	9600	880
C21	Generator	13.5	14.14 26.2	9600	880
C22	Generator	13.5	14.14 26.2	9600	880
C23	Generator	13.5	14.14 26.2	9600	880
C24	Generator	13.5	14.14 26.2	9600	880

Comment 15: IPL

In the TSD under **Source Status**, the table should reflect the corrected emission calculation for SO₂.

Response to Comment 15:

The TSD **Source Status** table that appears on page 4 of 8 of the public notice version TSD is as listed below:

Source Status

New Source PSD Definition (emissions after controls, based on 492 annual limited operating hours per unit):

Pollutant	Potential To Emit (tons/year)*
PM	4.4
PM-10	4.4
SO ₂	35.9
VOC	6.4
CO	135.2
NO _x	249.0

In the application submitted to ERMD by IPL on September 28, 2000, IPL submitted the manufacturer's (Cummins) estimated emission factors for all criteria pollutants based on manufacturer testing. A comparison of manufacturer estimates and AP-42 Table 3.4-2 emission estimates was performed on each spreadsheet calculation page (page 1 through 7) of the TSD Appendix A in order to assess which emission rate(s) were higher per pollutant. The AP-42 emission factor estimate of SO₂ emissions is higher than the manufacturer's estimate regardless of a diesel fuel content of 0.5% or 0.05%. The public notice version TSD emission estimates used a fuel sulfur content of 0.5% sulfur and restricted fuel consumption of 879,796 gallons per rolling 12 consecutive month period such that the source would be limited to less than 249.0 NO_x emissions per rolling twelve consecutive month period. This limited SO₂ emissions to 35.9 tons per year.

IPL wanted the flexibility to switch out engines during the valid period of the permit. Therefore, the modeling protocol negotiated between IPL, IDEM, OAQ and ERMD prior to the public notice period stipulated that IPL would model worst case emission rates for all criteria pollutants regardless of engine size. It is estimated that IPL does not anticipate changing the overall number of engines permitted at this site but does anticipate possibly changing out the size configuration over the term of the permit.

In evaluating modeling inputs for criteria pollutants, it was noted that the TSD used a fuel sulfur content of 0.5% instead of the application sulfur content of 0.05% and a CO emission rate of 22.9 pounds per hour instead of 10.24 pounds per hour (the AP-42 emission factor of 0.85 pounds/MMBtu x 12.05 MMBtu/hr). Reexamination of all spreadsheets and emission factors could not reveal the origin of the CO emission rate of 22.9 pounds per hour.

Changing the fuel sulfur content effectively changed the worst case emission rate of any size generator for SO₂ emissions from 6.09 pounds to 0.609 pounds per hour. Therefore, the **Source Status** table reflects the worst case emission factor for any criteria pollutant applied to the fuel cap (879,796 gallons) that limits NO_x emissions to less than 249.0 tons per rolling twelve consecutive month period. The fuel cap is the practically enforceable limitation in order to have 326 IAC 2-2 Prevention of Significant Deterioration not apply.

This TSD Addendum modifies the TSD Appendix A page 6 of 7 calculation page as shown below to show that SO₂ emissions are limited to 3.6 tons per year by revising the fuel sulfur content to 0.05% S (1.01 lbs SO₂/MMBtu x 0.05S = 0.0505 lbs SO₂/MMBtu or 0.609 lbs SO₂/hr for the 1500 kilowatt size engine which is equivalent to 12.05 MMBtu/hr) and CO emissions to 60.5 tons per year.

Pollutant	engine size	AP-42 #s mmBtu	lbs/ hr	Emission factor source	Emissions at limited Hours per year (tons/ yr)
PM	1500	0.062	0.75	AP-42	4.43
PM-10 **	1500	0.062	0.75	AP-42	4.43
SO ₂	1500	0.0505 0.505	0.609 6.09	AP-42	3.6 35.96
VOC	1500	0.09	1.08	AP-42	6.38
CO	1500	0.85 1.9	10.24 22.9	AP-42	60.5 135.22
NO _x	1250	3.2	42.17	manufacturer	249.00

Amending TSD Appendix A page 6 of 7 now reflects a new **Source Status** table as listed below:

Pollutant	Potential To Emit (tons/year)*
PM	4.4
PM-10	4.4
SO ₂	3.6 36.0
VOC	6.4
CO	60.5 135.2
NO _x	249.0

Comment 16: IPL

In the TSD under **State and Local Rule Applicability - Entire Source**; 326 IAC 2-6.1 (Minor Source Operating Permit Program), please review the statement “provide a one-time notice.” 326 IAC 2-6.1-5 requires an annual notification.

Response to Comment 16:

It is correct that 326 IAC 2-6.1-5 requires an annual notification. This form appears correctly on page 22 of 27 of the proposed MSOP 097-12818-00377 and the annual notification requirement appears correctly as Condition C.21 Annual Notification. The TSD language is revised in this TSD Addendum to state:

326 IAC 2-6.1 (Minor Source Operating Permit Program)

Pursuant to 326 IAC 2-6.1-5 (Minor Source Operating Permit Program: Operating Permit Content), an authorized individual shall provide an **Annual Notification** ~~a one-time notice~~ **no later than March 1 of each year** to the Environmental Resources Management Division and the Office of Air ~~Quality Management~~ that the source is in compliance with this permit.

Each of the following comments and resulting responses are from the air quality modeling study entitled “Evaluation of Ambient Impacts from Diesel Engine Generators; Brookwood and Thompson Substations Indianapolis, Indiana” submitted by IPL on January 10, 2001, the February 1, 2001 ERMD and IPL meeting to discuss the implications of the air quality modeling study as it relates to the Thompson Station and the air quality modeling study entitled “Addendum to: Evaluation of Ambient

Impacts from Diesel Engine Generators; Indianapolis Indiana submitted by IPL on February 20, 2001.

Comment: IPL (modeling studies and meeting summarized by ERMD)

IPL is proposing to operate portable diesel fired internal combustion engine generators at the Thompson Station - 4812 Bridgeport Road, Indianapolis, Indiana. Power generated will be supplied to the power grid from this operation intended to supply additional local power needs during peak demand times. The initial configuration of the Thompson Station calls for twenty four (24) generators to be located at this site. A modeling protocol was negotiated between IPL, IDEM, OAQ and ERMD prior to the public notice period. The negotiated modeling protocol required worst case emission rates for all criteria pollutants. Because the units are leased, it is entirely possible that one or all generators at a site may be switched out with a generator that had a higher hourly emission rate. IPL was intending to demonstrate through the air quality modeling study entitled "Evaluation of Ambient Impacts from Diesel Engine Generators; Brookwood and Thompson Substations Indianapolis, Indiana" that these sites, with a larger number of generators, would show attainment with the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. If these sites did not show a NAAQS exceedance, then it was reasoned that a site with fewer generators would not either. Modeling also was to examine HAPs emission rates and if these emissions posed any lifetime cancer risk.

According to the hazard screening performed in the January 10, 2001 modeling study, the HAP concentrations were all well below their respective levels for one (1) in a million lifetime risk for developing cancer. HAP emissions were predicted to have an exposure level of less than 0.5% of the Permissible Exposure Limit (PEL) for each HAP assessed.

The initial modeling study submitted during the public notice period did indicate that ambient concentrations are predicted above the NAAQS for PM₁₀ (24 hour), NO₂ (annual average) and CO (8 hour) at the Brookwood Station (see below-all units listed are micrograms per cubic meter) and are predicted above the NAAQS for PM₁₀ (24 hour) at the Thompson Station.

Pollutant	1 hour standard/ modeled rate	3 hour standard/ modeled rate	8 hour standard/ modeled rate	24 hour standard/ modeled rate	Annual Average standard/ modeled rate
PM10	NA	NA	NA	150 / 334	50 / 25
NO2	NA	NA	NA	NA	100 / 173
CO	40,000 / 15,809	NA	10,000 / 10,209	NA	NA
SO2	NA	1,300 / 698	NA	365 / 304	80 / 16

However, it is important to note that all NAAQS exceedances are predicted to occur on IPL property and do not occur off the property boundary at either site. All receptors which were sited off the property boundaries and whose siting was approved by IDEM, OAQ and ERMD did not predict NAAQS exceedances. Past EPA modeling guidance, based in part on the definition of "ambient air" as found in 40 CFR 50 and contained in the "New Source Review Manual: Prevention of Significant Deterioration and Nonattainment Area Permitting," modeling receptors should be placed on plant property if there is no continuous physical barrier, such as a fence or wall, which precludes public access to plant property.

As a result of the initial modeling study and the February 1, 2001 source meeting, IPL has approached a supplemental analysis with the goal of demonstrating that the emissions from diesel generators at any of the nine (9) sites will not adversely impact the NAAQS, while providing as much flexibility as possible on the mix and location of diesel generators for each site. Strategies to be assessed include:

- 1) Consideration of the exact mix and location of diesel generators to be used at a particular

site;

- 2) Fencing to limit access; and
- 3) Limitations in hours of operation per day in order to meet all NAAQS.

On February 20, 2001, IPL submitted the air quality modeling study entitled "Addendum to: Evaluation of Ambient Impacts from Diesel Engine Generators; Indianapolis Indiana." Due to the fact that IPL intends to permit nine (9) separate sites, IPL intends to have the modeling scenario of a rural site with twenty four (24) generators be used to demonstrate compliance with the NAAQS for the Thompson Station.

Worst case engine stack parameters and emission rates were used but IPL specifically requests that diesel engine generator operation will be limited to no more than 16.0 hours of operation per day in order to demonstrate compliance with the NAAQS and to **not** have to construct a physical barrier on the property such that a NAAQS exceedance is predicted to occur on the portions of the property without restricted public access. These emission units are intended to be peaking units and each unit is not likely to be operated 24 hours per day. Limiting the daily hours of operation effectively averages the worst case emission rate to a ratio of 16.0/24ths of the worst case emission rate to demonstrate compliance with all NAAQS.

The results of this modeling scenario are listed below.

Pollutant	1 hour standard/ modeled rate	3 hour standard/ modeled rate	8 hour standard/ modeled rate	24 hour standard/ modeled rate	Annual Average standard/ modeled rate
PM10	NA	NA	NA	150 / 148.8	50 / 22.5
NO2	NA	NA	NA	NA	100 / 57.7
CO	40,000 / 14,381.0	NA	10,000 / 7,531.6	NA	NA
SO2	NA	1,300 / 557.9	NA	365 / 140.1	80 / 13.4

Response to Comment:

It appears that the modeling scenario of twenty four (24) engines using rural dispersion coefficients and limiting each engine operation to less than 16.0 hours per day would demonstrate compliance with any NAAQS. However, twenty four (24) generators operating at 16.0 hours per day each over a potential 365 day period equates to 140,160 combined engine operating hours per year. The fuel cap set (879,796 gallons) for this site to stay under 249.0 tons of Nox emissions per rolling twelve consecutive month period essentially equates to each engine operating for a maximum of 492 annual operating hours (see TSD Appendix A page 6 of 7) which is equivalent to (24 x 492) 11,808 combined engine operating hours per year. Therefore, limiting daily engine operating hours would not demonstrate compliance with a rolling twelve (12) consecutive month period NO_x emission rate limitation.

As a result it appears that this site will have to retain the fuel cap set to stay under 249.0 tons of NO_x emissions per rolling twelve (12) consecutive month period and have a maximum daily engine operating schedule of no more than 16.0 hours per day such that compliance with 326 IAC 1-3 (Ambient Air Quality Standards) and 40 CFR Part 50 (National Primary and Secondary Ambient Air Quality Standards) will be demonstrated. IPL will have to maintain a daily record of engine operation and a rolling monthly record of fuel consumption such that 326 IAC 2-2 (Prevention of Significant Deterioration) does not apply for NO_x emissions.

The addition of a maximum daily operating schedule requires the following changes:

- (1) The insertion of a TSD Addendum section and discussion under **State and Local Rule Applicability - Entire Source** for 326 IAC 1-3 (Ambient Air Quality Standards)
- (2) Insertion of a new condition D.1.2 NAAQS Demonstration [40 CFR 50][326 IAC 1-3] and additional record keeping and reporting requirements under amended conditions D.1.4 (D.1.5) and D.1.5 (D.1.6).
- (3) The inclusion of a new Monthly Report Form(s) to include the tracking of daily engine operating hours.

State and Local Rule Applicability - Entire Source

326 IAC 1-3 (Ambient Air Quality Standards)

On February 20, 2001, IPL submitted the air quality modeling study entitled "Addendum to: Evaluation of Ambient Impacts from Diesel Engine Generators; Indianapolis Indiana." Due to the fact that IPL intends to permit nine (9) separate sites, IPL intends to have the modeling scenario of a rural site with twenty four generators be used to demonstrate compliance with the NAAQS for the Thompson Station. Worst case engine stack parameters and emission rates were used but IPL specifically requests that diesel engine generator operation will be limited to no more than 16.0 hours of operation per day in order to demonstrate compliance with all NAAQS and to **not** have to construct a physical barrier on the property such that a NAAQS exceedance is predicted to occur on the portions of the property without restricted public access. These emission units are intended to be peaking units and each unit is not likely to be operated 24 hours per day. Limiting the daily hours of operation effectively averages the worst case emission rate to a ratio of 16.0/24ths of the worst case emission rate to demonstrate compliance with a 24 hour standard.

A revised Section D.1 is now amended to state:

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

- | |
|--|
| <p>(a) Six (6) Cummins diesel fired portable generators identified as Emission Unit ID C1, C2, C3, C4, C5, and C6. Each generator is an internal combustion engine rated at 1250 kilowatts or 1635 brake horsepower with a maximum hourly diesel fuel consumption rate of 74.5 gallons per hour.</p> <p>(b) Eighteen (18) Cummins diesel fired portable generators identified as Emission Unit ID C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, and C24. Each generator is an internal combustion engine rated at 1500 kilowatts or 1855 brake horsepower with a maximum hourly diesel fuel consumption rate of 84.5 gallons per hour.</p> |
|--|

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) Emission Unit ID C1 through C24 shall be limited to a combined total of 879,000 gallons of diesel fuel per rolling twelve (12) consecutive month period.
- (b) Emission Unit ID C1 through C24 each shall be limited to 42.17 pounds NO_x per hour.

Limiting combined total maximum diesel fuel consumption to 879,000 gallons per rolling twelve (12) consecutive month period and NO_x emissions to 42.17 pounds per hour for each Emission Unit is equivalent to 249.0 tons of NO_x emissions per rolling twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

By limiting combined total maximum diesel fuel consumption to 879,000 gallons per rolling twelve (12) consecutive month period, PM, PM-10, and VOC emissions are less than 10.0 tons per rolling twelve (12) consecutive month period. By limiting combined total maximum diesel fuel consumption to 879,000 gallons per rolling twelve (12) consecutive month period, SO₂ emissions from each Emission Unit ID C1 through C9 are less than 25.0 tons per rolling twelve (12) consecutive month period. Therefore, 326 IAC 6 (Particulate Rules), 326 IAC 7 (Sulfur Dioxide Rules) and 326 IAC 8 (Volatile Organic Compound Rules) do not apply.

D.1.2 NAAQS Demonstration [40 CFR 50][326 IAC 1-3]

Pursuant to 40 CFR Part 50 (National Primary and Secondary Ambient Air Quality Standards) and 326 IAC 1-3 (Ambient Air Quality Standards), Emission Unit ID C1 through C24 each shall not be operated more than a cumulative total of 16.0 hours per calendar day such that attainment of all National Ambient Air Quality Standards (NAAQS) will be demonstrated.

D.1.3 ~~D.1.2~~ Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit ID C1 through C24.

Compliance Determination Requirements

D.1.4 ~~D.1.3~~ Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM and/or ERMD may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or ERMD, compliance with the NO_x limit specified in Condition D.1.1(b) shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.5 ~~D.1.4~~ Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records of combined total diesel fuel consumption for Emission Unit ID C1 through C24. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the diesel fuel usage limits and/or the Nox emission limit established in Condition D.1.1.
- (b) **To document compliance with Condition D.1.2, the Permittee shall maintain records of Emission Unit ID C1 through C24 operating hours. Records maintained shall be taken daily and shall be complete and sufficient to establish compliance with the maximum daily operating schedule established in Condition D.1.2.**
- ~~(b)~~ (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.6 ~~D.1.5~~ Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, **D.1.2** and ~~D.1.4~~ **D.1.5** shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

The imposition of a daily operating hour limitation such that there will be no violation of an ambient air quality standard requires the addition of a new monthly report of daily operating hours per engine.

Monthly reports shall be submitted on a quarterly basis as referenced by the amended condition ~~D.1.5~~ **(D.1.6)**. The new report form(s) appears on the following page(s). This new form is being inserted as Page 21 and Page 22 and the entire document will now contain 29 pages instead of 27.

Indiana Department of Environmental Management Office of Air Quality Compliance Data Section and City of Indianapolis Environmental Resources Management Division Monthly Report

Company Name: Indianapolis Power & Light Company - Thompson Station
 Location: 4812 Bridgeport Road, Indianapolis, Indiana 46231
 Permit No.: MSOP 097-12818-00377
 Source: Emission Unit ID's C1 through C12
 Pollutant: NAAQS Demonstration
 Limit: Each engine, C1 through C12, limited to 16.0 or less operating hours per day

Month:												Year:													
Day	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	Day	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
1													17												
2													18												
3													19												
4													20												
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11													27												
12													28												
13													29												
14													30												
15													31												
16																									

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Indiana Department of Environmental Management Office of Air Quality Compliance Data
Section and
City of Indianapolis Environmental Resources Management Division
Monthly Report

Company Name: Indianapolis Power & Light Company - Thompson Station
Location: 4812 Bridgeport Road, Indianapolis, Indiana 46231
Permit No.: MSOP 097-12818-00377
Source: Emission Unit ID's C13 through C24
Pollutant: NAAQS Demonstration
Limit: Each engine, C13 through C24, limited to 16.0 or less operating hours per day

Month: _____ **Year:** _____

Day	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	Day	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24
1													17												
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15													31												
16																									

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**Indiana Department of Environmental Management
Office of Air Management
and
City of Indianapolis
Indianapolis Environmental Resources Management Division**

**Technical Support Document (TSD) for New Source Construction and
Minor Source Operating Permit**

Source Background and Description

Source Name: Indianapolis Power & Light Company
Source Location: Thompson Station - 4812 Bridgeport Road, Indianapolis, IN
County: Marion
SIC Code: 4911
Operation Permit No.: 097-12818-00377
Permit Reviewer: Jeremy Boyer

The City of Indianapolis Environmental Resources Management Division (ERMD) and the Office of Air Management (OAM) have reviewed an application received from Indianapolis Power & Light Company on September 28, 2000 relating to the operation of diesel generators at the above referenced location under a Standard Industrial Classification Code (SIC) of 4911 (establishments engaged in the generation, transmission, and/or distribution of electric energy for sale).

New Emission Units and Pollution Control Equipment

The source consists of the following emission units and pollution control devices:

- (a) Six (6) Cummins diesel fired portable generators identified as Emission Unit ID C1, C2, C3, C4, C5, and C6. Each generator is an internal combustion engine rated at 1250 kilowatts or 1635 brake horsepower with a maximum hourly diesel fuel consumption rate of 74.5 gallons per hour.
- (b) Eighteen (18) Cummins diesel fired portable generators identified as Emission Unit ID C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, and C24. Each generator is an internal combustion engine rated at 1500 kilowatts or 1855 brake horsepower with a maximum hourly diesel fuel consumption rate of 84.5 gallons per hour.

Unpermitted Emission Units and Pollution Control Equipment

There are no previously unpermitted facilities operating at this location during this review process.

Existing Approvals

There are no approvals issued to this source during this review. This source was previously issued a registration (R097-12024-00377) on May 12, 2000 which expired on September 30, 2000. There was an expiration date placed in the Registration because the emission units installed at the time of issuance were leased units with the leasing expiring at the end of summer 2000. As a result, this issuance will be considered as the first approval for this source as the leased units have been removed from the premises and the R097-12034-00377 expired September 30, 2000.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter* (Inches)	Flow Rate (cfm)	Temperature (°F)
C1	Generator	13.5	26.2	8845	985
C2	Generator	13.5	26.2	8845	985
C3	Generator	13.5	26.2	8845	985
C4	Generator	13.5	26.2	8845	985
C5	Generator	13.5	26.2	8845	985
C6	Generator	13.5	26.2	8845	985
C7	Generator	13.5	26.2	9600	880
C8	Generator	13.5	26.2	9600	880
C9	Generator	13.5	26.2	9600	880
C10	Generator	13.5	26.2	9600	880
C11	Generator	13.5	26.2	9600	880
C12	Generator	13.5	26.2	9600	880
C13	Generator	13.5	26.2	9600	880
C14	Generator	13.5	26.2	9600	880
C15	Generator	13.5	26.2	9600	880
C16	Generator	13.5	26.2	9600	880
C17	Generator	13.5	26.2	9600	880
C18	Generator	13.5	26.2	9600	880
C19	Generator	13.5	26.2	9600	880
C20	Generator	13.5	26.2	9600	880
C21	Generator	13.5	26.2	9600	880
C22	Generator	13.5	26.2	9600	880
C23	Generator	13.5	26.2	9600	880
C24	Generator	13.5	26.2	9600	880

* Effective Diameter

Given: 2 stacks of 18.5 inches diameter each

Determine individual stack areas:

$$3.142 \times (18.50 \text{ inches}/2)^2 = 3.142 \times 85.56 \text{ inches radius} = 268.8 \text{ sq. inches area}$$

Determine total stack area:

$$268.8 \text{ sq. inches area} + 268.8 \text{ sq. inches area} = 537.6 \text{ sq. inches total area}$$

Determine effective stack radius:

$$537.6 \text{ sq. inches total area}/3.142 = \text{square root of } 171.1 \text{ sq. inches} = 13.08 \text{ inches radius}$$

Determine effective stack diameter:

$$13.08 \text{ inches radius} \times 2 = 26.16 \text{ inches diameter}$$

Enforcement Issues

There are no enforcement actions pending.

Recommendation

The staff recommends to the Administrator that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete application for the purposes of this review was received on September 28, 2000. Additional information on derivation of emission factors and stack data was received on December 18, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations. Appendix A, Page 4 of 7 shows that manufacturer's emission estimates for the controlling pollutant, NO_x, are higher than AP-42 emission factors. As a result, manufacturer emission estimates were used to determine potential to emit for NO_x.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)*
PM	23.65
PM-10	23.65
SO ₂	102.55
VOC	54.87
CO	266.71
NO _x	3463.17
Highest single HAP	Benzene 0.92
Combination HAP's	1.77
TOTAL	3936.37

*based on 8760 hours/yr operation

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of CO, SO₂, and NO_x are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) Pursuant to 326 IAC 2-5.1-4 (Construction of New Sources: Transition Provisions), the Commissioner shall include an approval to operate and operating conditions in an initial construction permit. A source may request approval to operate under a state operating permit under 326 IAC 2-6.1 if the source is subject to the Part 70 requirements of 326 IAC 2-7 (Part 70 Permit Program) and will submit a Part 70 permit application within twelve (12) months of the date the source is approved to operate. The source has potential to emit above major source thresholds and is seeking initial approval to construct and operate under 326 IAC 2-6.1 (Minor Source Operating Permit Program).
- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IA. 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) are not counted toward determination of P.D. and Emission Offset applicability.

Actual Emissions

No previous emission data has been received.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	unclassifiable
SO ₂	maintenance attainment
Ozone	maintenance attainment
CO	attainment
NO _x	attainment
Lead	unclassifiable

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as maintenance attainment for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Marion County has been classified as attainment for SO₂ and CO, maintenance attainment for ozone, and unclassifiable for PM, PM₁₀, and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) emissions are not counted toward determination of PSD applicability.

Source Status

New Source PSD Definition (emissions after controls, based on 492 annual limited operating hours per unit):

Pollutant	Potential To Emit (tons/year)*
PM	4.4
PM-10	4.4
SO ₂	35.9
VOC	6.4
CO	135.2
NO _x	249.0

* based on 492 combined total annual operating hours per unit

- (a) This new source is not a major stationary source because no one regulated attainment pollutant is emitted at a rate of 250 tons per year or greater. This new source is not one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the

PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) at least one of the criteria pollutants is greater than or equal to 100 tons per year,

Pursuant to 326 IAC 2-5.1-4 (Construction of New Sources: Transition Provisions), this new source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source meets an applicability date of 326 IAC 2-7-2.

Federal Rule Applicability

- (a) This electrical generating substation is not subject to the New Source Performance Standards (NSPS) as there are no applicable NSPS for reciprocating internal combustion generators.
- (b) This electrical generating substation is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) as there are no applicable NESHAP for reciprocating internal combustion generators.
- (c) The source meets the exemption(s) for new units under 40 CFR 72.7 Acid Rain Program General Provisions; New Units Exemption because no generator or combination of generators operating in unison that would then be considered one generating unit exceeds 25 megawatts total nameplate capacity and burns only fuels with a sulfur content of 0.05 percent or less by weight. Therefore, the source is subject to the provisions of 40 CFR 72.7 concerning permitting and 40 CFR 75 concerning monitoring but is subject to no other provisions of the Acid Rain Program. To be eligible for the new unit exemption, the source must also file a new unit exemption form with IDEM and USEPA no later than December 31st of the first year which the unit is to be exempt.

State and Local Rule Applicability - Entire Source

326 IAC 1-5-2 (Emergency Reduction Plans)

All sources that have potential to emit one hundred (100) tons per year, or more, of any pollutant shall prepare and submit to IDEM, OAM and ERMD for approval written emergency reduction plans consistent with safe operating procedures. Said submittal shall be made no later than one hundred and eighty (180) days from the date on which a new source commences operation. If the emergency reduction plan (ERP) is disapproved, the source shall have an additional thirty (30) days to resolve the differences and submit an approvable (ERP). The ERP shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions including a brief description of the manner in which the reduction will be achieved.

326 IAC 1-6 (Malfunctions)

326 IAC 1-6 (Malfunctions) applies to any facility required to obtain a permit under (326 IAC 2-5.1 or 326 IAC 2-6.1. Because potential to emit exceeds the minimum permitting thresholds of 326 IAC 2-5.1-3, 326 IAC 1-6 (Malfunctions) applies to this source. As a result, the malfunction notice requirements of 326 IAC 1-6-2 (Malfunctions: notice) and the preparation of a preventive maintenance plan under 326 IAC 1-6-3 (Malfunctions: Preventive Maintenance Plans apply to this source.

326 IAC 1-7 (Stack Height Provisions)

By limiting the source to 879,000 gallons of diesel fuel consumption (492 total annual operating hours per unit) per rolling twelve (12) consecutive month period, no individual generator has potential to emit particulate matter (PM) or sulfur dioxide (SO₂) in excess of twenty five (25) tons per year. Therefore, 326 IAC 1-7 (Stack Height Provisions) does not apply.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements)

This new source will install twenty four (24) diesel fired generators. Potential to emit NO_x is in excess of 250 tons per year (see TSD PTE Table). Potential to emit NO_x will be limited to less than 250 tons per rolling twelve consecutive month period such that 326 IAC 2-2 (PSD Requirements) does not apply (see TSD Source Status: New Source PSD Definition Table). The manufacturer's emission factor estimate for NO_x exceeds the AP-42 Table 3.4-1 NO_x emission estimate (see TSD Appendix A page 1,2 and 3 of 7). The manufacturer's NO_x emission factor estimate of 42.17 pounds per hour for all engines, regardless of kilowatt rating, emitting this worst case hourly emission rate for 492 total annual operating hours per unit is equivalent to 879,000 gallons of diesel fuel consumption and 249.0 tons of NO_x per rolling twelve (12) consecutive month period for this source. The source will be limited to 879,000 gallons of diesel fuel consumption per rolling twelve (12) consecutive month period. Therefore, the PSD requirements do not apply to this source.

$$[42.17 \text{ lbs Nox/hr} \times 24 \text{ units} \times 492 \text{ hrs/yr}] / [2000 \text{ lbs/tons}] = 249.0 \text{ tons NOx/yr}$$

$$74.5 \text{ gal/hr} \times 24 \text{ units} \times 492 \text{ hrs/yr} = 879,000 \text{ gal/yr}$$

326 IAC 2-4.1-1 (Major Sources of Hazardous Air Pollutants)

326 IAC 2-4.1-1 (Major Sources of Hazardous Air Pollutants) does not apply to this new source as no individual HAP or combination of HAP exceeds a major source threshold.

326 IAC 2-5.1-3 (Construction of New Sources: Permits)

Pursuant to 326 IAC 2-5.1-3 (Construction of New Sources: Permits), potential to emit SO₂, NO_x, VOC, CO, PM, and PM₁₀ all exceed minimum permitting thresholds and require a construction permit. Pursuant to 326 IAC 2-5.1-3(g) and (h), there shall be a public notice requirement for the proposed new construction and the permittee shall submit an Affidavit of Construction after construction has been completed.

Pursuant to 326 IAC 2-5.1-4 (Construction of New Sources: Transition Provisions), the Commissioner shall include an approval to operate and operating conditions in an initial construction permit. A source may request approval to operate under a state operating permit under 326 IAC 2-6.1 if the source is subject to the Part 70 requirements of 326 IAC 2-7 (Part 70 Permit Program) and will submit a Part 70 permit application within twelve (12) months of the date the source is approved to operate. The source has potential to emit above major source thresholds and is seeking initial approval to construct and operate under 326 IAC 2-6.1 (Minor Source Operating Permit Program).

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of NO_x in Marion County. Pursuant to this rule, the owner/operator of the source must submit an annual emission statement for the source. The permit will be issued for a period of one (1) year. The annual statement must be received by April 15, of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 2-6.1 (Minor Source Operating Permit Program)

Pursuant to 326 IAC 2-6.1-5 (Minor Source Operating Permit Program: Operating Permit Content), an authorized individual shall provide a one-time notice to the Environmental Resources Management Division and the Office of Air Management that the source is in compliance with this permit.

326 IAC 2-7 (Part 70 Permit Program)

This source will install twenty four (24) diesel powered generators. The source wide Potential to Emit NO_x will exceed 100 tons per year. Therefore, the source will be subject to Title V requirements. A source may request approval to operate under a state operating permit under 326 IAC 2-6.1 if the source is subject to the Part 70 requirements of 326 IAC 2-7 (Part 70 Permit Program) and must submit a Part 70 permit application within twelve (12) months of the date the source is approved to operate.

326 IAC 5-1 (Opacity Regulations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 9 (Carbon Monoxide Emission Rules)

326 IAC 9 (Carbon Monoxide Emission Rules) does not apply to this source as the operation of reciprocating internal combustion engines at this site is not a specified applicable category or operation identified in 326 IAC 9 (Carbon Monoxide Emission Rules). In addition, there are no applicable provisions to this new source to limit carbon monoxide (CO) emissions to less than 100 tons or 25 tons per year. However, by limiting the source to 879,000 gallons of diesel fuel consumption (492 total annual operating hours per unit) per rolling twelve (12) consecutive month period, CO emissions are less than 250 tons per rolling twelve (12) consecutive month period.

326 IAC 20 (Hazardous Air Pollutants)

326 IAC 20 (Hazardous Air Pollutants) does not apply to this new source because it is not a major HAP source. In addition, there are no 40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAPs) for reciprocating internal combustion generators.

326 IAC 21 (Acid Deposition Control)

Other than the filing of new exempt units under 40 CFR 72.7 Acid Rain Program General Provisions; New Units Exemption, the source is not subject to 326 IAC 21, which adopts by reference 40 CFR 72 through 40 CFR 78, because no generator or combination of generators operating in unison that would then be considered one generating unit exceeds 25 megawatts total nameplate capacity and burns only fuels with a sulfur content of 0.05 percent or less by weight. Therefore, the source is subject to the provisions of 40 CFR 72.7 concerning permitting and 40 CFR 75 concerning monitoring but is subject to no other provisions of the Acid Rain Program.

State and Local Rule Applicability - Individual Facilities

326 IAC 6 (Particulate Rules)

The source consists of twenty four (24) generators powered by reciprocating internal combustion engines combusting diesel fuel. By limiting the source to 879,000 gallons of diesel fuel consumption (492 total annual operating hours per unit) per rolling twelve (12) consecutive month period, potential to emit PM is calculated to be less than ten (10) tons per year (see TSD Source Status: New Source PSD Definition Table). Therefore, no PM limit for these units is established pursuant to 326 IAC 6-1 (Nonattainment Area Limitations).

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating) does not apply to this source as the reciprocating internal combustion engines are not indirect heating units.

Pursuant to 326 IAC 1-2-59 (Definitions), liquid and gaseous fuels and combustion air will not be considered as part of the process weight in determining applicability of 326 IAC 6-3 (Process Operations). Therefore, 326 IAC 6-3 (Process Operations) does not apply to liquid fuel fired generators at this source.

326 IAC 7 (Sulfur Dioxide Rules)

By limiting the source to 879,000 gallons of diesel fuel consumption (492 total annual operating hours per unit) per rolling twelve (12) consecutive month period, no individual generator has potential to emit sulfur dioxide (SO₂) in excess of twenty five (25) tons per year. Therefore, 326 IAC 7 (Sulfur Dioxide Rules) does not apply.

326 IAC 8 (Volatile Organic Compounds)

By limiting the source to 879,000 gallons of diesel fuel consumption (492 total annual operating hours per unit) per rolling twelve (12) consecutive month period, source wide VOC emissions are less than 25 tons per year. Therefore, 326 IAC 8-1-6 (New Facilities; General provisions relating to VOC rules: general reduction requirements for new facilities) does not apply to this source.

No other 326 IAC 8 (Volatile Organic Compounds) provisions apply to reciprocating internal combustion engines.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

An ISC model analysis was performed by IDEM and ERMD to determine the HAP concentrations. According to the preliminary hazard screening, the HAP concentrations were all well below their respective levels for one (1) in a million lifetime risk for developing cancer (see TSD Appendix A Page 5 of 7).

See spreadsheets (Appendix A, Page 4 of 7) for detailed air toxic calculations.

Conclusion

The operation of Indianapolis Power & Light Company (Thompson Station) shall be subject to the conditions of the attached proposed **New Source Construction and Minor Source Operating Permit** 097-12817-00378.

APPENDIX: A

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel

Portable Diesel Generators (>600 HP)
Zero 1000 kW Units Using Mfr's Emission Factors
Company Name: Indianapolis Power & Light (Thompson Substation)
Address City IN Zip: 4812 South Bridgeport Road, Indpls., IN
Permit #: 097-12818-00377
Reviewer: J. Boyer
Date: 12/11/00

A. Comparison of AP-42 Emissions Factors and Mfr's Emission Factors.

	Pollutant					
	PM	PM10**	SO2	NOx	VOC	CO
AP-42 Emission Factor in lb/MMBtu	0.1	0.0573	0.1 (1.01S)	3.2	0.1	0.85
AP-42 Emission Factor in lb/HP-hr*	2.54E-04	1.46E-04	4.05E-04	8.14E-03	2.29E-04	2.16E-03
Mfr's Emission Factors in lb/HP-hr	1.10E-03	1.10E-03 **not provided	1.34E-03	1.83E-02	4.19E-04	2.25E-03

* using AP-42 conversion factor of 2,542.5 Btu/HP

B. Emissions calculated based on output rating (hp) For 0 Generators at 8760 Hours Each

Heat Input Capacity Potential Throughput S= 0.05 = WEIGHT % SULFUR
Horsepower (hp) hp-hr/yr

0.0 0.0

0 engines x 1350 hp

	Pollutant					
	PM*	PM10**	SO2	NOx*	VOC*	CO*
Emission Factor in lb/hp-hr	1.10E-03	1.10E-03 **not provided	1.34E-03 (.00809S)	1.83E-02	4.19E-04	2.25E-03
Potential Emission in tons/yr	0.0	0.0	0.0	0.0	0.0	0.0

*PM, NOx, VOC, and CO emission factors provided by manufacturer

Methodology

Potential Througput (hp-hr/yr) = hp * 8760 hr/yr

*No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included. The PM10 emission factor is filterable and condensable PM10 combined.

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel

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Portable Diesel Generators (>600 HP)
Six 1250 kW Units Using Mfr's Emission Factors
Company Name: Indianapolis Power & Light (Thompson Substation)
Address City IN Zip: 4812 South Bridgeport Road, Indpls., IN
Permit #: 097-12818-00377
Reviewer: J. Boyer
Date: 12/11/00

A. Comparison of AP-42 Emissions Factors and Mfr's Emission Factors.

	Pollutant					
	PM	PM10**	SO2	NOx	VOC	CO
AP-42 Emission Factor in lb/MMBtu	0.1	0.0573	0.1 (1.01S)	3.2	0.1	0.85
AP-42 Emission Factor in lb/HP-hr*	2.54E-04	1.46E-04	4.05E-04	8.14E-03	2.29E-04	2.16E-03
Mfr's Emission Factors in lb/HP-hr	1.76E-04	1.76E-04 **not provided	1.26E-03	2.58E-02	3.75E-04	1.34E-03

* using AP-42 conversion factor of 2,542.5 Btu/HP
1.370619946

B. Emissions calculated based on output rating (hp) For 6 Generators at 8760 Hours Each

Heat Input Capacity Potential Throughput S= 0.05 = WEIGHT % SULFUR
Horsepower (hp) hp-hr/yr

9810.0 85935600.0
6 engines x 1635 hp

	Pollutant					
	PM*	PM10**	SO2	NOx*	VOC*	CO*
Emission Factor in lb/hp-hr	1.76E-04	1.76E-04 **not provided	1.26E-03 (.00809S)	2.58E-02	3.75E-04	1.34E-03
Potential Emission in tons/yr	7.6	7.6	54.1	1108.6	16.1	57.6

*PM, NOx, VOC, and CO emission factors provided by manufacturer

Methodology

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr

*No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included. The PM10 emission factor is filterable and condensable PM10 combined.

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Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel

Page 3 of 7 TSD App A

Portable Diesel Generators (>600 HP)
Eighteen 1500 kW Units Using Mfr's Emission Factors
Company Name: Indianapolis Power & Light (Thompson Substation)
Address City IN Zip: 4812 South Bridgeport Road, Indpls., IN
Permit #: 097-12818-00377
Reviewer: J. Boyer
Date: 12/11/00

A. Comparison of AP-42 Emissions Factors and Mfr's Emission Factors.

AP-42 Emission Factor in lb/MMBtu	Pollutant					
	PM 0.1	PM10** 0.0573	SO2 0.1 (1.01S)	NOx 3.2	VOC 0.1	CO 0.85
AP-42 Emission Factor in lb/HP-hr*	2.54E-04	1.46E-04	1.28E-04	8.14E-03	2.29E-04	2.16E-03
Mfr's Emission Factors in lb/HP-hr	1.10E-04	1.10E-04 **not provided	3.31E-04	1.61E-02	2.65E-04	1.43E-03

* using AP-42 conversion factor of 2,542.5 Btu/HP

B. Emissions calculated based on output rating (hp) F 18 Generators at 8760 Hours Each

Heat Input Capacity Potential Throughput S= 0.05 = WEIGHT % SULFUR
Horsepower (hp) hp-hr/yr

33390.0 292496400.0
18 engines x 1855 hp

Emission Factor in lb/HP-hr	Pollutant					
	PM*	PM10**	SO2	NOx*	VOC*	CO*
	1.10E-04	1.10E-04	3.31E-04	1.61E-02	2.65E-04	1.43E-03
		**not provided	(.00809S)			
Potential Emission in tons/yr	16.1	16.1	48.4	2354.6	38.8	209.1

*PM, NOx, VOC, and CO emission factors provided by manufacturer

Methodology

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr

*No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included. The PM10 emission factor is filterable and condensable PM10 combined.

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Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel

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Portable Diesel Generators (>600 HP)

HAPs Emission Calculations per AP-42

Company Name: Indianapolis Power & Light (Thompson Substation)
Address City IN Zip: 4812 South Bridgeport Road, Indpls., IN
Permit #: 097-12818-00377
Reviewer: J. Boyer
Date: 12/11/00

ID	Gal/hr	MMBtu/hr	Hr/yr
1000	64.6	8.9	8760
1250	74.5	10.3	8760
1500	87.3	11.7	8760

HAP Emissions for Single Engine:

HAP	Emission Factor lbs/MMBtu	Lb/hr 1000	Lb/hr 1250	Lb/hr 1500
Acetaldehyde	2.52E-05	2.24E-04	2.59E-04	2.94E-04
Acrolein	7.78E-06	6.93E-05	7.99E-05	9.07E-05
Benzene	7.76E-04	6.91E-03	7.97E-03	9.05E-03
Formaldehyde	7.89E-05	7.03E-04	8.11E-04	9.20E-04
Naphthalene	1.30E-04	1.16E-03	1.34E-03	1.52E-03
Toluene	2.81E-04	2.50E-03	2.89E-03	3.28E-03
Xylenes	1.93E-04	1.72E-03	1.98E-03	2.25E-03

Engine Identification		1000	1250	1500		
Engines used at this Location		0	6	18		
HAP	Emission Factor lbs/MMBtu	Lb/hr 1000	Lb/hr 1250	Lb/hr 1500	Emissions Lb/hr	Emissions Ton/yr
Acetaldehyde	2.52E-05	0.0000	0.0016	0.0053	0.0068	0.0300
Acrolein	7.78E-06	0.0000	0.0005	0.0016	0.0021	0.0093
Benzene	7.76E-04	0.0000	0.0478	0.1629	0.2107	0.9229
Formaldehyde	7.89E-05	0.0000	0.0049	0.0166	0.0214	0.0938
Naphthalene	1.30E-04	0.0000	0.0080	0.0273	0.0353	0.1546
Toluene	2.81E-04	0.0000	0.0173	0.0590	0.0763	0.3342
Xylenes	1.93E-04	0.0000	0.0119	0.0405	0.0524	0.2295
Total HAP Emissions:				0.3131	0.4051	1.7742

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel

Portable Diesel Generators (>600 HP)
Comparison of Emissions per Source's and AP-42
Company Name: Indianapolis Power & Light (Thompson Substation)
Address City IN Zip: 4812 South Bridgeport Road, Indpls., IN
Permit #: 097-12818-00377
Reviewer: J. Boyer
Date: 12/11/2000

Per IPL Data				Heat Input
Unit ID	Unit Size	Gal/hr	Btu/Gal	MMBtu/hr
1000 DFJD	1350 BHP	64.6	138,000	8.9
1250 DFCL	1635 BHP	74.5	138,000	10.3
1500 DFLE	1855 BHP	87.3	138,000	12.0

AP-42 Conversions Factors			
Unit ID	HP/kW	Btu/HP	HP elect./HP mech.
1000 DFJD	1.3407	2,542.5	0.9996
1250 DFCL	1.3407	2,542.5	0.9996
1500 DFLE	1.3407	2,542.5	0.9996

Emission Factors From IPL Conversion Factors from AP-42				
Unit ID	PM lb/BHP-hr	NOx lb/BHP-hr	VOC lb/BHP-hr	CO lb/BHP-hr
1000 DFJD	1.10E-03	1.83E-02	4.19E-04	2.25E-03
1250 DFCL	1.76E-04	2.58E-02	3.75E-04	1.34E-03
1500 DFLE	1.10E-04	1.61E-02	2.65E-04	1.43E-03

Emission Factors from AP-42 Emission Factors from AP-42				
Unit ID	PM lb/MMBtu	NOx lb/MMBtu	VOC lb/MMBtu	CO lb/MMBtu
1000 DFJD	0.062	3.20	0.09	1.90
1250 DFCL	0.062	3.20	0.09	1.90
1500 DFLE	0.062	3.20	0.09	1.90

Emission Factors From IPL Conversion Factors from AP-42				
Unit ID	PM tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Emission totals for 0 engines				
1000 DFJD	0.00	0.00	0.00	0.00
Emission totals for 6 engines				
1250 DFCL	7.56	1108.57	16.11	57.58
Emission totals for 18 engines				
1500 DFLE	16.09	2354.60	38.76	209.13
TOTALS	23.65	3463.17	54.87	266.71

Emission Factors from AP-42 Conversion Factors from AP-42				
Unit ID	PM tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Emission totals for 0 engines				
1000 DFJD	0.00	0.00	0.00	0.00
Emission totals for 6 engines				
1250 DFCL	14.51	749.16	21.07	444.81
Emission totals for 18 engines				
1500 DFLE	43.54	2247.47	63.21	1334.43
TOTALS	58.06	2996.62	84.28	1779.24

Engines will be grouped in a set of six 1000 DFJD's, a set of six 1250 DFCL's, and a set of 13N 1500 DFLE's for a total of twenty-five engines at this substation.

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr per each of the engines at this location or MMBtu * 8760 hr/yr per each of the engines at this location.

**Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel**

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**Portable Diesel Generators (>600 HP)
Fuel Consumption per Year and Resulting Emissions
Company Name: Indianapolis Power & Light (Thompson Substation)
Address City IN Zip: 4812 South Bridgeport Road, Indpls., IN
Permit #: 097-12818-00377
Reviewer: J. Boyer
Date: 12/11/2000**

(Total # of engines at site **X** (x) operating hours per year **X** max hourly emission rate of Nox) / 2000 lbs

$$24 \quad \mathbf{X} \quad \frac{\text{#####}}{\text{hr}} \quad \mathbf{X} \quad \frac{(\mathbf{x}) \text{ hrs}}{\text{yr}} \quad \mathbf{X} \quad \frac{\text{ton}}{2000 \text{ lbs}} = 249 \text{ tpy NOx}$$

x = 492 annual operating hours

Emission, Factors, and Data Sources Based on IPL Data					
Pollutant	engine size	AP-42 #s mmBtu	lbs/ hr	Emission factor source	Emissions at limited Hours per year (tons/ yr)
PM	1500	0.062	0.75	AP-42	4.43
PM-10 **	1500	0.062	0.75	AP-42	4.43
SO2	1500	0.505	6.09	AP-42	35.96
VOC	1500	0.09	1.08	AP-42	6.38
CO	1500	1.9	22.9	AP-42	135.22
NOx	1250	3.2	42.17	manufacturer	249.00

** not provided

$$492 \quad \text{annual operating hours} \quad \mathbf{X} \quad 24 \quad \mathbf{X} \quad \frac{74.5 \text{ gallons}}{\text{hr}} = 879,796 \text{ gallons per year}$$

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel

Page 7 of 7 TSD App A

Portable Diesel Generators (>600 HP)
HAPs Emission Emission Calculations per AP-42
Company Name: Indianapolis Power & Light (Thompson Substation)
Address City IN Zip: 4812 South Bridgeport Road, Indpls., IN
Permit #: 097-12818-00377
Reviewer: J. Boyer
Date: 12/11/00

Emission Factors From IPL Conversion Factors from AP-42				
Unit ID	PM tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Emission totals for 0 engines				
1000 DFJD	0.00	0.00	0.00	0.00
Emission totals for 6 engines				
1250 DFLE	7.56	1108.57	16.11	57.58
Emission totals for 18 engines				
1500 DFLE	16.09	2354.60	38.76	209.13
TOTALS	23.65	3463.17	54.87	266.71

Emission Factors from AP-42 Conversion Factors from AP-42				
Unit ID	PM tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Emission totals for 0 engines				
1000 DFJD	0.00	0.00	0.00	0.00
Emission totals for 6 engines				
1250 DFLE	14.51	749.16	21.07	444.81
Emission totals for 18 engines				
1500 DFLE	43.54	2247.47	63.21	1334.43
TOTALS	58.06	2996.62	84.28	1779.24

Engine Identification		1000	1250	1500		
Engines used at this Location		0	6	18		
HAP	Emission Factor lbs/MMBtu	Lb/hr 1000	Lb/hr 1250	Lb/hr 1500	Emissions Lb/hr	Emissions Ton/yr
Acetaldehyde	2.52E-05	0.0000	0.0016	0.0053	0.0068	0.0300
Acrolein	7.78E-06	0.0000	0.0005	0.0016	0.0021	0.0093
Benzene	7.76E-04	0.0000	0.0478	0.1629	0.2107	0.9229
Formaldehyde	7.89E-05	0.0000	0.0049	0.0166	0.0214	0.0938
Naphthalene	1.30E-04	0.0000	0.0080	0.0273	0.0353	0.1546
Toluene	2.81E-04	0.0000	0.0173	0.0590	0.0763	0.3342
Xylenes	1.93E-04	0.0000	0.0119	0.0405	0.0524	0.2295
Total HAP Emissions:				0.3131	0.4051	1.7742

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr

TSD PTE Table

Pollutant	PTE in tons
PM	23.65
PM-10	23.65
SO2	102.55
VOC	54.87
CO	266.71
NOx	3463.17
HAP's	1.77
Benzene	0.92
TOTAL	3936.37